concerns about adverse effects. In addition, respondents expressed a desire to modify their diet and exercise, and/or take non-prescription products to lower their cholesterol. These findings are consistent with other studies that have assessed patient factors related to adherence with statin therapy. These data warrant the need for interventions that address patients' negative perceptions of statins while emphasizing the benefits of statins for reducing cardiovascular morbidity and mortality.

Keywords: Adherence, Statins

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PS2-15:

Linking Disparate Data Sources to Evaluate Implantable Cardioverter Defibrillator Outcomes in the Cardiovascular Research Network: Initial Lessons

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Background/Aims: Implantable cardioverter defibrillators (ICDs) result in striking mortality benefits among randomized trial populations, but elucidation of outcomes in real-world populations is needed to optimize care and coverage decisions. The Cardiovascular Research Network (CVRN) Longitudinal ICD Study is a new 7-site 3.5-year project evaluating the rate of appropriate device therapies, device complications, hospitalization, mortality, and utilization/cost among a cohort of primary prevention ICD patients. **Methods:** This project links baseline data from the National Cardiovascular Data Registry (NCDR) for ICDs, the virtual data warehouses (VDW) of participating CVRN sites, and novel collection of post-implant ICD device activity from CVRN care delivery systems. NCDR ICD data from 14 implanting hospitals from 2006-2009 were matched to health plan membership and uploaded to the study following necessary approvals. VDW tables have been constructed at the CVRN sites to capture longitudinal clinical and administrative detail. Forms and procedures for abstracting ICD device interrogations and treated arrhythmic episodes have been pilot tested, and procedures have been established both for central review of source documentation and adjudication by an external panel of expert electrophysiologists. **Results:** A cohort of 2500 primary prevention ICD recipients has been assembled. The pilot study evaluated collection and review of device interrogations and treated arrhythmic episodes among a sample of 43 subjects. Lessons from the first study year include: 1) the need to allow additional time and effort to establish/modify contractual agreements between external partners; 2) the benefits of support from an engaged group of stakeholders; 3) the substantial differences across and within study sites as to how ICD device interrogation records are archived and tracked, with local data sources including centralized medical records, stand alone pacemaker/ICD clinic files, electronic interrogation archives, and remote interrogation websites; and, 4) the importance of caution when planning for the review and adjudication of real world medical record data based on published approaches from prospective trials. **Conclusions:** Following establishment of the study cohort and piloting abstraction/adjudication procedures, the data collection phase is underway. Further lessons from initial abstraction will be available at the time of the HMORN conference. The study period ends March 2013.

Keywords: Implantable cardioverter defibrillators, Outcomes

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PS2-34:

Patterns of Complex Comorbidity in Older Patients with Heart Failure

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Background: The presence of multiple comorbidities in an elderly patient can make clinical decision-making and disease management challenging, and may increase the risk for adverse outcomes including unnecessary hospitalizations, adverse drug events, and functional decline. Approximately one half of patients with HF have at least one additional comorbid condition present. Despite the increasing prevalence of multiple comorbidities in patients with HF, data are lacking on whether various comorbidities of HF cluster together, and whether certain clusters of comorbidities are associated with adverse clinical outcomes in these high risk patients. **Methods:** The study population includes 37,823 patients in the CVRN PRESERVE cohort, a multicenter cohort of patients with HF diagnosed between 2005 and 2008, that is currently being conducted at 4 CVRN sites: Kaiser Permanente of Northern California, Kaiser Permanente Colorado, Kaiser Permanente Northwest and Fallon Community Health Plan/Meyers. Approximately 46% of the cohort is female and 78% are >65 years old. **Results:** The prevalence of specific comorbidities range from low [e.g., ischemic stroke, 5.3% (2,004 of 37,823); TIA, 4.0% (1,500 of 37,823)] to moderate or high [e.g., cognitive impairment/dementia, 12.4% (4,678 of 37,823); hypertension, 48.4% (18,311 of 37,823)]. We will characterize the patterns of comorbidity using cluster analysis. Cluster analysis is a novel approach to examining the co-occurrence of multiple comorbidities that goes beyond traditional indices, such as the Charlson and Elixhauser, that simply count diseases. Examples of clusters that may be present in patients with HF are: cardiopulmonary (e.g., coronary heart disease, COPD), circulatory (e.g., hypertension, atrial fibrillation), sensory-motor (deafness and visual impairment) and neurological (e.g., dementia, depression). We will describe the demographic characteristics of high frequency clusters and examine whether patterns of comorbidity vary according to whether HF is with or without preserved left ventricular systolic function. **Conclusions:** Future work in this cohort will examine the association between patterns of comorbidity clusters and use of selected HF-related therapies, early physician follow-up among those hospitalized for HF, and rehospitalization in the 1- and 6-month periods after hospital discharge.

Keywords: Heart failure, Epidemiology

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C-A4-02:

Electronic Health Record-Based Cardiovascular Risk Assessment and the Use of BMI When Laboratory Data is Not Available

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Background/Aims: Multivariate cardiovascular disease (CVD) risk calculators, such as the Framingham risk equations can be used to identify populations most likely to benefit from treatments to decrease risk. We wanted to determine what proportion of adults in a large integrated health plan had sufficient automated laboratory data to calculate risk and when insufficient laboratory data was available whether BMI could be used. **Methods:** The setting was 26 primary care clinics in Washington (Group Health). We used automated databases to identify patients' age 30-74 with at least 2 years continuous enrollment prior to April 1, 2010 and no CVD. The goal was to define two different Framingham risk scores using only automated data; one based on lipids (laboratory-based), and one based on BMI (clinic-based). We describe the proportion of patients for whom we were able to calculate risk, the data missing when we could not, and the